

DESCRIPTION OF TABLES AND CHARTS.

Table I gives the data ordinarily needed for climatological studies for about 158 Weather Bureau stations making simultaneous observations at 8 a. m. and 8 p. m. daily, 75th meridian time, and for about 41 others making only one observation. The altitudes of the instruments above ground are also given.

Table II gives a record of precipitation, the intensity of which at some period of the storm's continuance equaled or exceeded the following rates:

| Duration (minutes)..... | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 60 |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|
| Rates per hour (inches)..... | 3.00 | 1.80 | 1.40 | 1.20 | 1.08 | 1.00 | 0.94 | 0.90 | 0.87 | 0.84 | 0.80 |

It is impracticable to make this table sufficiently wide to accommodate on one line the record of accumulated falls that continue at an excessive rate for several hours. In this case the record is broken at the end of each 50 minutes, the accumulated amounts being recorded on successive lines until the excessive rate ends.

In cases where no storm of sufficient intensity to entitle it to a place in the full table has occurred the greatest precipitation of any single storm has been given; also the greatest hourly fall during that storm.

The tipping-bucket mechanism is *dismounted* and removed when there is danger of snow or water freezing in the same. Table II records this condition by entering an asterisk (*).

Table III gives, for about 30 stations of the Canadian Meteorological Service, the means of pressure and temperature, total precipitation and depth of snowfall, and the respective departures from normal values except in the case of snowfall. The sealevel pressures have been computed at Washington by the method employed for reducing United States observations and described by F. H. Bigelow in this REVIEW, January, 1902, pages 13-16; the altitudes are those furnished us on January 1, 1916.

Chart I.—Hydrographs for several of the principal rivers of the United States.

Chart II.—Tracks of centers of HIGH areas; and

Chart III.—Tracks of centers of LOW areas. The roman numerals show the chronological order of the centers. The figures within the circles show the days of the month; the letters *a* and *p* indicate, respectively, the observations at 8 a. m. and 8 p. m., 75th meridian time. Within each circle is also given (Chart II) the last three figures of the highest barometric reading or (Chart III) the lowest reading reported at or near the center at that time, and in both cases as reduced to sealevel and standard gravity.

Chart IV.—Temperature departures. This chart presents the departures of the monthly mean temperatures from the monthly normals. The normals used in computing the departures were computed for a period of 33 years (1873 to 1905) and are published in Weather Bureau Bulletin "R," Washington, 1908. Stations whose records were too short to justify the preparation of normals in 1908 have been provided with normals as adequate records became available, and all have been reduced to the 33-year interval 1873-1905. The shaded portions of the chart indicate areas of positive departures and unshaded portions indicate areas of negative departures. Generalized lines connect places having approximately equal departures of like sign. This chart of monthly temperature departures in the United States was first published in the MONTHLY WEATHER REVIEW for July, 1909.

Chart V.—Total precipitation. The scale of shades showing the depth is given on the chart. Where the monthly amounts are too small to justify shading and over sections of the country where stations are too widely separated or the topography is too diversified to warrant reasonable accuracy in shading, the actual depths are given for a limited number of representative stations. Amounts less than 0.005 inch are indicated by the letter T, and no precipitation by 0.

Chart VI.—Percentage of clear sky between sunrise and sunset. The average cloudiness at each Weather Bureau station is determined by numerous personal observations between sunrise and sunset. The difference between the observed cloudiness and 100 is assumed to represent the percentage of clear sky, and the values thus obtained are the basis of this chart. The chart does not relate to the nighttime.

Chart VII.—Isobars and isotherms at sealevel and prevailing wind directions. The pressures have been reduced to sealevel and standard gravity by the method described by Prof. Frank H. Bigelow on pages 13-16 of the REVIEW for January, 1902. The pressures have also been reduced to the mean of the 24 hours by the application of a suitable correction to the mean of the 8 a. m. and 8 p. m. readings at stations taking two observations daily, and to the 8 a. m. or the 8 p. m. observations, respectively, at stations taking but a single observation. The diurnal corrections so applied will be found in the Annual Report of the Chief of the Weather Bureau, 1900-1901, volume 2, Table 27, pages 140-164.

The isotherms on the sealevel plane have been constructed by means of the data summarized in chapter 8 of volume 2 of the annual report just mentioned. The correction, $t_0 - t$, or temperature on the sealevel plane minus the station temperature as given by Table 48 of that report, is added to the observed surface temperature to obtain the adopted sealevel temperature.

The prevailing wind directions are determined from hourly observations at the great majority of the stations. A few stations having no self-recording wind-direction apparatus determine the prevailing direction from the daily or twice-daily observations only.

Chart VIII.—Total snowfall. This is based on the reports from regular and cooperative observers and shows the depth in inches and tenths of the snowfall during the month. In general, the depth is shown by lines inclosing areas of equal snowfall, but in special cases figures are also given. Chart VIII is published only when the general snow cover is sufficiently extensive to justify its preparation.

Chart IX.—Average values of pressure, temperature, and prevailing wind directions, and storm tracks over the North Atlantic Ocean for the corresponding month of last year.

Chart X.—Presents annually the tracks of hurricanes of the year; tracks of the same month are all in one color. This chart was first published in the issue for September, 1916.

Chart XI.—Presents annually, by means of a dot for each report, the frequency of earthquakes in the United States during the year. This chart was first published in the REVIEW for December, 1915.

TABLE I.—Climatological data for Weather Bureau stations, January, 1917.

| Districts and stations. | Elevation of instruments. | | | Pressure. | | | Temperature of the air. | | | | | | Precipitation. | | | Wind. | | | Maximum velocity. | | | Snow on ground at end of month. | | | | | | | | | | | |
|--------------------------------|----------------------------|---------------------------|--------------------------|---------------------------------------|---|------------------------|----------------------------|---------------|------------------------|-------|---------------|----------|----------------|---------------|-----------------------|-----------------------|-----------|------------------------|------------------------------|-----------------|-----------------|---------------------------------|-------|-------------|---------------------|--------------|-----------------------------|-----------------|------|------|------|------|-----|
| | Banometer above sea level. | Thermometer above ground. | Anemometer above ground. | Station, reduced to mean of 24 hours. | Sea level, reduced to mean of 24 hours. | Departure from normal. | Mean max. + mean min. + 2. | Mean maximum. | Departure from normal. | Date. | Mean maximum. | Minimum. | Date. | Mean minimum. | Greatest daily range. | Mean wet thermometer. | Total. | Departure from normal. | Days with 0.01 inch or more. | Total movement. | Miles per hour. | Direction. | Date. | Clear days. | Partly cloudy days. | Cloudy days. | Average cloudiness, tenths. | Total snowfall. | | | | | |
| | Ft. | Ft. | Ft. | In. | In. | In. | ° F. | ° F. | ° F. | | ° F. | ° F. | | ° F. | ° F. | ° F. | In. 3. 17 | In. 0. 3 | Miles. | | | | | | | | | | | | | | |
| <i>New England.</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eastport. | 76 | 67 | 85 | 29.84 | 29.93 | -0.07 | 20.6 | + 0.5 | 47 | 13 | 29 | -8 | 20 | 13 | 33 | 19 | 12 | 70 | 3.87 | 0.0 | 10,128 | w. | 50 | s. | 14 | 6 | 13 | 6.1 | 19.6 | 7.2 | | | |
| Greenville. | 1,070 | 6 | 28.70 | 29.92 | -0.07 | 12.4 | - | 43 | 14 | 22 | -16 | 20 | 3 | 36 | 19 | 12 | 66 | 4.63 | + 0.7 | 15 | 9,810 | w. | 68 | se. | 14 | 11 | 7 | 13 | 5.6 | 24.2 | 12.6 | | |
| Portland, Me. | 103 | 82 | 117 | 29.85 | 29.98 | -0.07 | 22.4 | + 0.4 | 47 | 14 | 20 | -2 | 20 | 15 | 19 | 19 | 12 | 66 | 3.35 | 0.0 | 12,406 | nw. | 32 | s. | 22 | 8 | 6 | 17 | 6.4 | 18.8 | 10.5 | | |
| Concord. | 288 | 70 | 79 | 29.66 | 29.99 | -0.06 | 21.4 | + 0.3 | 42 | 14 | 25 | -14 | 12 | 7 | 32 | 21 | 12 | 66 | 2.18 | + 0.4 | 15 | 9,992 | s. | 48 | s. | 29 | 6 | 6 | 19 | 7.3 | 16.6 | 11.8 | |
| Burlington. | 404 | 11 | 48 | 29.50 | 29.97 | -0.08 | 16.0 | -0.3 | 42 | 14 | 21 | -21 | 20 | 3 | 37 | 13 | 10 | 84 | 3.20 | + 0.7 | 12 | 5,527 | s. | 34 | s. | 5 | 6 | 6 | 20 | 7.6 | 23.2 | 19.5 | |
| Northfield. | 876 | 12 | 60 | 28.98 | 29.97 | -0.08 | 14.5 | -0.6 | 46 | 14 | 21 | -21 | 20 | 3 | 37 | 13 | 10 | 84 | 2.82 | -1.0 | 12 | 8,320 | w. | 39 | sw. | 14 | 9 | 5 | 17 | 6.5 | 13.1 | 0.6 | |
| Boston. | 125 | 115 | 188 | 29.84 | 29.99 | -0.05 | 30.2 | + 3.2 | 55 | 14 | 33 | 5 | 12 | 23 | 40 | 27 | 22 | 73 | 2.82 | -0.7 | 12 | 11,688 | nw. | 42 | sw. | 14 | 7 | 8 | 16 | 7.0 | 0.6 | T. | |
| Nantucket. | 12 | 14 | 90 | 29.98 | 29.99 | -0.05 | 31.4 | -0.7 | 50 | 14 | 38 | 6 | 12 | 26 | 31 | 25 | 25 | 76 | 2.98 | -0.9 | 13 | 15,402 | nw. | 60 | nw. | 19 | 10 | 9 | 17 | 6.5 | 1.1 | T. | |
| Block Island. | 26 | 11 | 46 | 29.97 | 30.00 | -0.07 | 32.0 | + 0.6 | 51 | 14 | 38 | 7 | 12 | 21 | 36 | 27 | 26 | 71 | 3.01 | -1.4 | 14 | 10,268 | w. | 60 | w. | 22 | 9 | 5 | 17 | 6.5 | 10.0 | T. | |
| Narragansett Pier. | 9 | | | | | | 27.1 | -1.3 | 45 | 5 | 33 | -1 | 12 | 21 | 36 | 27 | 26 | 70 | 2.90 | -0.9 | 13 | 5,813 | nw. | 45 | s. | 14 | 8 | 4 | 19 | 7.2 | 7.9 | 1.0 | |
| Providence. | 160 | 215 | 251 | 29.81 | 30.00 | -0.06 | 29.6 | + 2.4 | 53 | 14 | 36 | 2 | 12 | 21 | 34 | 25 | 20 | 73 | 3.01 | -1.4 | 14 | 10,268 | nw. | 60 | w. | 22 | 9 | 5 | 17 | 6.5 | 10.0 | T. | |
| Hartford. | 159 | 122 | 140 | 29.83 | 30.01 | -0.05 | 28.2 | + 2.7 | 52 | 14 | 36 | 4 | 12 | 23 | 32 | 27 | 23 | 73 | 3.34 | -0.6 | 13 | 6,813 | nw. | 44 | s. | 14 | 9 | 5 | 17 | 6.6 | 4.3 | 0.1 | |
| New Haven. | 106 | 117 | 155 | 29.90 | 30.02 | -0.06 | 30.6 | + 3.3 | 50 | 14 | 38 | 4 | 12 | 23 | 32 | 27 | 23 | 73 | 3.34 | -0.6 | 13 | 6,813 | nw. | 44 | s. | 14 | 9 | 5 | 17 | 6.6 | 6.3 | 0.3 | |
| <i>Middle Atlantic States.</i> | | | | | | | 34.1 | + 2.5 | | | | | | | | | | 72 | 2.90 | -0.3 | | | | | | | | | | | | | |
| Albany. | 97 | 102 | 115 | 29.90 | 30.01 | -0.01 | 24.7 | + 2.2 | 48 | 14 | 32 | -2 | 12 | 17 | 33 | 22 | 17 | 71 | 1.67 | -0.9 | 11 | 5,844 | s. | 28 | s. | 10 | 9 | 5 | 17 | 6.5 | 4.7 | 1.0 | |
| Binghamton. | 871 | 10 | 69 | 29.03 | 29.99 | -0.11 | 25.3 | + 2.7 | 46 | 5 | 34 | 0 | 27 | 17 | 36 | 26 | 21 | 64 | 2.44 | -1.4 | 14 | 14,389 | nw. | 68 | se. | 5 | 7 | 9 | 15 | 6.5 | 6.5 | 0.5 | |
| New York. | 314 | 414 | 454 | 29.67 | 30.03 | -0.07 | 32.4 | + 2.2 | 52 | 5 | 40 | 7 | 12 | 25 | 27 | 26 | 21 | 70 | 2.40 | + 1.4 | 12 | 5,115 | nw. | 32 | w. | 22 | 7 | 8 | 16 | 6.8 | 5.9 | 0.5 | |
| Harrisburg. | 374 | 94 | 104 | 29.64 | 30.06 | -0.04 | 30.5 | + 1.8 | 52 | 5 | 38 | 11 | 12 | 23 | 25 | 27 | 21 | 70 | 1.90 | -1.5 | 10 | 8,092 | nw. | 40 | s. | 14 | 8 | 8 | 15 | 6.5 | 5.4 | 0.5 | |
| Philadelphia. | 117 | 123 | 190 | 29.93 | 30.06 | -0.05 | 35.2 | + 3.4 | 54 | 5 | 42 | 12 | 12 | 28 | 31 | 31 | 25 | 70 | 1.46 | + 0.6 | 14 | 5,065 | nw. | 37 | se. | 3 | 7 | 9 | 15 | 6.4 | 9.1 | 0.5 | |
| Reading. | 325 | 81 | 98 | 29.70 | 30.07 | -0.07 | 31.4 | -0.7 | 55 | 14 | 39 | 9 | 12 | 24 | 36 | 29 | 22 | 69 | 1.45 | + 0.4 | 16 | 6,040 | sw. | 39 | sw. | 22 | 8 | 9 | 14 | 6.3 | 9.3 | 0.5 | |
| Scranton. | 805 | 111 | 119 | 29.14 | 30.03 | -0.06 | 28.4 | + 2.9 | 52 | 14 | 36 | 2 | 12 | 20 | 37 | 25 | 21 | 76 | 3.15 | + 0.4 | 16 | 6,040 | sw. | 30 | s. | 14 | 8 | 8 | 15 | 6.3 | 7.0 | 0.3 | |
| Atlantic City. | 52 | 37 | 48 | 30.00 | 30.00 | -0.05 | 33.2 | + 2.7 | 57 | 22 | 43 | 10 | 12 | 28 | 32 | 32 | 27 | 74 | 2.82 | -0.5 | 11 | 6,059 | nw. | 62 | s. | 14 | 7 | 9 | 15 | 6.3 | 6.4 | 0.5 | |
| Cape May. | 18 | 13 | 49 | 30.09 | 30.08 | -0.04 | 34.5 | + 0.7 | 54 | 22 | 41 | 14 | 12 | 28 | 35 | 33 | 23 | 71 | 2.83 | -0.1 | 13 | 6,894 | nw. | 31 | se. | 13 | 8 | 7 | 16 | 6.5 | 1.6 | 0.5 | |
| Sandy Hook. | 22 | 10 | 57 | 30.00 | 30.03 | -0.05 | 32.4 | -0.5 | 50 | 14 | 38 | 10 | 12 | 27 | 31 | 31 | 23 | 71 | 3.10 | -0.1 | 13 | 8,782 | w. | 51 | sw. | 14 | 8 | 8 | 15 | 6.5 | 6.3 | 0.5 | |
| Trenton. | 190 | 159 | 183 | 29.82 | 30.03 | -0.07 | 32.4 | -0.5 | 55 | 14 | 40 | 8 | 12 | 25 | 32 | 33 | 23 | 71 | 3.10 | -0.1 | 13 | 8,782 | w. | 62 | s. | 14 | 7 | 9 | 15 | 6.3 | 6.4 | 0.5 | |
| Baltimore. | 123 | 100 | 113 | 29.94 | 30.07 | -0.05 | 35.3 | + 1.9 | 57 | 22 | 42 | 15 | 12 | 28 | 30 | 30 | 23 | 78 | 2.78 | -0.4 | 14 | 12,455 | w. | 26 | w. | 22 | 10 | 8 | 15 | 6.2 | 5.9 | 0.5 | |
| Washington. | 112 | 62 | 85 | 29.94 | 30.07 | -0.06 | 35.0 | + 2.1 | 59 | 22 | 42 | 14 | 12 | 27 | 30 | 30 | 23 | 78 | 2.80 | -0.5 | 11 | 6,476 | nw. | 35 | sw. | 22 | 11 | 4 | 18 | 6.0 | 4.8 | 0.5 | |
| Lynchburg. | 681 | 153 | 188 | 29.30 | 30.07 | -0.06 | 39.4 | + 3.0 | 67 | 30 | 49 | 13 | 12 | 30 | 29 | 34 | 26 | 69 | 2.89 | -1.0 | 12 | 5,284 | w. | 29 | nw. | 6 | 8 | 9 | 14 | 6.5 | 0.1 | 0.5 | |
| Norfolk. | 91 | 170 | 205 | 29.98 | 30.08 | -0.05 | 12.8 | + 2.4 | 68 | 5 | 51 | 19 | 12 | 34 | 33 | 35 | 29 | 79 | 2.28 | -1.1 | 16 | 9,931 | sw. | 40 | sw. | 22 | 7 | 8 | 16 | 6.5 | 0.5 | T. | |
| Richmond. | 144 | 11 | 52 | 28.91 | 30.08 | -0.05 | 38.3 | + 1.8 | 63 | 22 | 49 | 16 | 12 | 30 | 30 | 33 | 29 | 79 | 2.98 | -0.0 | 14 | 5,795 | sw. | 31 | sw. | 22 | 7 | 8 | 16 | 6.5 | 0.5 | T. | |
| Wytheville. | 2,263 | 49 | 55 | 27.63 | 30.07 | -0.07 | 38.2 | + 5.2 | 63 | 31 | 47 | 8 | 12 | 30 | 30 | 33 | 30 | 75 | 3.77 | -0.5 | 17 | 6,087 | w. | 31 | w. | 18 | 10 | 10 | 11 | 5.5 | 1.3 | 0.5 | |
| <i>South Atlantic States.</i> | | | | | | | 50.8 | + 5.6 | | | | | | | | | | 81 | 3.10 | -0.8 | | | | | | | | | | | | | 6.0 |
| Key West. | 22 | 10 | 64 | 30.10 | 30.12 | + 0.02 | 72.6 | + 3.8 | 81 | 28 | 78 | 57 | 12 | 67 | 13 | 67 | 65 | 82 | 0.14 | -1.8 | 3 | 7,182 | e. | 26 | n. | 11 | 24 | 7 | 0 | 1.8 | 0.0 | 0.0 | |
| Miami. | 25 | 79 | 79 | 30.12 | 30.15 | -0.08 | 69.8 | + 2.5 | 79 | 24 | 74 | 43 | 12 | 64 | 25 | 65 | 62 | 70 | 0.11 | -3.3 | 3 | 5,825 | e. | 36 | n. | 11 | 24 | 7 | 1 | 3.0 | 0.0 | 0.0 | |
| Sand Key. | 23 | 39 | 72 | 30.08 | 30.11 | + .01 | 72.4 | - | 81 | 15 | 75 | 37 | 12 | 57 | 28 | 60 | 58 | 85 | 0.08 | -2.1 | 4 | 4,349 | nw. | 26 | sw. | 10 | 12 | 16 | 3 | 4.3 | 0.0 | 0.0 | |
| Tampa. | 35 | 79 | 98 | 30.11 | 30.16 | + .04 | 65.8 | + 8.4 | 81 | 15 | 75 | 37 | 12 | 57 | 28 | 60 | 58 | 85 | 0.68 | -2.1 | 4 | 4,349 | nw. | 40 | sw. | 5 | 11 | 14 | 6 | 4.5 | 0.0 | 0.0 | |
| <i>East Gulf States.</i> | | | | | | | 53.4 | + 6.1 | | | | | | | | | | 81 | 5.50 | + 0.5 | | | | | | | | | | | | | 6.5 |
| Atlanta. | 1,174 | 190 | 216 | 28.86 | 30.12 | -0.03 | 47.9 | + 5.7 | 72 | 30 | 55 | 18 | 12 | 40 | 23 | 44 | 40 | 78 | 5.11 | -0.2 | 17 | 8,612 | nw. | 44 | nw. | 5 | 9 | 5 | 17 | 6.8 | 6.8 | T. | |
| Macomb. | 370 | 87 | 97 | 29.72 | 30.12 | -0.04 | 52.2 | + 6.6 | 76 | 30 | 55 | 21 | 12 | 43 | 44 | 45 | 45 | 82 | 4.69 | -0.5 | 15 | 4,380 | s. | 26 | s. | 10 | 7 | 8 | 13 | 6.0 | 0.0 | 0.0 | |
| Thomasville. | 273 | 49 | 58 | 29.84 | 30.14 | -0.02 | 58.2 | + 7.2 | 78 | 30 | 68 | 27 | 12 | 48 | 31 | 53 | 50 | 82 | 6.61 | + 2.5 | 9 | | | | | | | | | | | | |

MONTHLY WEATHER REVIEW.

JANUARY, 1917

TABLE I.—*Climatological data for Weather Bureau stations, January, 1917—Continued.*

| Districts and stations. | Elevation of instruments. | | Pressure. | | Temperature of the air. | | | | | | | | | | Precipitation. | | Wind. | | Maximum velocity. | | Average cloudiness, tenths. | | Snow on ground at end of month. | | | | | | | | |
|-----------------------------------|----------------------------|---------------------------|---------------------------------------|---|-------------------------|----------------------------|------------------------|---------------|----------|-------|---------------|-----------------------|-----------------------|------------------------------------|----------------|------------------------|------------------------------|-----------------|-------------------|-----------------------|-----------------------------|-------------|---------------------------------|--------------|-----------------|---------|-----|------|-----|------|------|
| | Barometer above sea level. | Thermometer above ground. | Station, reduced to mean of 24 hours. | See level, reduced to mean of 24 hours. | Departure from normal. | Mean max. + mean min. + 2. | Departure from normal. | Mean maximum. | Minimum. | Date. | Mean minimum. | Greatest daily range. | Mean wet thermometer. | Mean temperature of the dew point. | Total. | Departure from normal. | Days with 0.01 inch or more. | Total movement. | Miles per hour. | Prevailing direction. | Date. | Clear days. | Partly cloudy days. | Cloudy days. | Total snowfall. | In. In. | | | | | |
| | Ft. | Ft. | Ft. | In. | In. | * F. | * F. | * F. | * F. | Date. | * F. | * F. | % | In. | In. | Miles. | Miles per hour. | Direction. | Date. | | | | | | | | | | | | |
| Ohio Valley and Tennessee. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Chattanooga. | 762 | 189 | 213 | 29.30 | 30.13 | -0.03 | 45.2 | + 4.6 | 73 | 29 | 53 | 18 | 12 | 38 | 24 | 41 | 36 | 73 | 7.42 | + 1.9 | 19 | 6,010 | sw. | 21 | 6 | 6 | 6 | 0-10 | 6.6 | | |
| Knoxville. | 996 | 93 | 100 | 29.01 | 30.09 | -0.06 | 43.4 | + 5.9 | 73 | 29 | 52 | 18 | 12 | 35 | 30 | 39 | 36 | 76 | 6.39 | + 1.8 | 18 | 5,181 | sw. | 3 | 9 | 9 | 7 | 7.1 | 0.1 | | |
| Memphis. | 399 | 76 | 97 | 29.70 | 30.13 | -0.03 | 44.7 | + 4.4 | 73 | 3 | 52 | 16 | 14 | 37 | 38 | 40 | 35 | 73 | 5.37 | + 0.2 | 15 | 5,646 | sw. | 21 | 5 | 5 | 5 | 5.4 | | | |
| Nashville. | 546 | 168 | 191 | 29.53 | 30.12 | -0.04 | 41.8 | + 3.8 | 73 | 29 | 50 | 11 | 14 | 33 | 32 | 33 | 34 | 77 | 7.27 | + 2.4 | 16 | 7,747 | s. | 52 | 16 | 16 | 16 | 7.1 | | | |
| Lexington. | 989 | 193 | 230 | 29.00 | 30.10 | -0.03 | 35.2 | + 2.2 | 65 | 31 | 44 | 55 | 15 | 27 | 33 | 32 | 33 | 29 | 5.67 | + 1.8 | 15 | 10,913 | sw. | 5 | 16 | 16 | 16 | 15.8 | | | |
| Louisville. | 525 | 219 | 249 | 29.50 | 30.10 | -0.04 | 35.9 | + 1.6 | 64 | 31 | 44 | 55 | 15 | 27 | 33 | 32 | 33 | 29 | 6.12 | + 2.2 | 13 | 9,443 | sw. | 50 | 14 | 14 | 14 | 9.9 | | | |
| Evansville. | 431 | 179 | 175 | 29.60 | 30.09 | -0.05 | 26.3 | + 4.0 | 61 | 31 | 44 | 55 | 15 | 28 | 36 | 33 | 30 | 78 | 4.93 | + 1.2 | 14 | 8,928 | sw. | 42 | 14 | 14 | 14 | 7.6 | | | |
| Indianapolis. | 822 | 194 | 230 | 29.14 | 30.06 | -0.06 | 30.6 | + 2.4 | 66 | 31 | 39 | 0 | 26 | 28 | 35 | 24 | 29 | 79 | 3.40 | + 0.6 | 18 | 9,464 | sw. | 48 | 11 | 11 | 11 | 5.8 | | | |
| Terre Haute. | 575 | 96 | 129 | 29.42 | 30.06 | -0.06 | 31.5 | - | 67 | 31 | 40 | 26 | 23 | 37 | 28 | 24 | 29 | 76 | 2.76 | - | 7 | 9,706 | sw. | 39 | 11 | 11 | 11 | 3.3 | | | |
| Cincinnati. | 628 | 11 | 51 | 29.37 | 30.07 | -0.05 | 32.4 | + 2.1 | 67 | 31 | 42 | 0 | 14 | 23 | 33 | 29 | 27 | 83 | 4.74 | + 1.4 | 14 | 8,559 | sw. | 21 | 5 | 11 | 11 | 7.3 | | | |
| Columbus. | 824 | 178 | 222 | 29.15 | 30.08 | -0.05 | 29.8 | + 1.2 | 62 | 31 | 38 | -2 | 24 | 22 | 27 | 27 | 24 | 80 | 3.74 | + 0.8 | 15 | 9,307 | sw. | 60 | w. | 23 | 12 | 15.4 | | | |
| Dayton. | 893 | 181 | 216 | 29.03 | 30.04 | -0.06 | 29.9 | + 1.0 | 64 | 31 | 35 | -1 | 14 | 22 | 31 | 28 | 25 | 84 | 4.04 | + 1.0 | 14 | 8,403 | sw. | 40 | w. | 22 | 12 | 9.0 | | | |
| Pittsburgh. | 842 | 313 | 410 | 29.12 | 30.08 | -0.06 | 31.6 | + 0.9 | 63 | 31 | 40 | 15 | 23 | 35 | 28 | 24 | 28 | 78 | 4.33 | + 1.5 | 14 | 9,340 | sw. | 53 | w. | 22 | 13 | 8.7 | | | |
| Elkins. | 1,940 | 41 | 50 | 27.95 | 30.08 | -0.04 | 32.6 | + 3.6 | 70 | 31 | 44 | 12 | 21 | 43 | 30 | 26 | 28 | 78 | 4.58 | + 1.2 | 17 | 3,529 | w. | 24 | w. | 22 | 4 | 7.0 | | | |
| Parkersburg. | 638 | 77 | 84 | 29.41 | 30.08 | -0.04 | 33.2 | + 1.9 | 72 | 31 | 42 | 4 | 17 | 24 | 33 | 30 | 27 | 80 | 5.71 | + 2.5 | 18 | 4,669 | sw. | 33 | nw. | 14 | 7 | 8 | 16 | 6.9 | 14.3 |
| Lower Lake Region. | | | | | | | | | | | | | | | | | | | | | | | | | | | 7.1 | | | | |
| Buffalo. | 767 | 247 | 280 | 29.12 | 29.98 | -0.09 | 24.4 | -0.3 | 48 | 5 | 31 | -2 | 12 | 18 | 30 | 22 | 19 | 83 | 2.79 | -0.5 | 17 | 17,820 | w. | 90 | w. | 22 | 2 | 10 | 19 | 7.7 | 16.8 |
| Canton. | 448 | 10 | 61 | 29.45 | 29.98 | -0.09 | 14.4 | -1.9 | 46 | 5 | 23 | 5 | 39 | - | 30 | 22 | 19 | 84 | 3.33 | + 0.2 | 17 | 9,856 | w. | 47 | sw. | 5 | 7 | 4 | 20 | 7.3 | 18.9 |
| Oswego. | 335 | 76 | 91 | 29.60 | 29.98 | -0.09 | 23.1 | -0.8 | 45 | 5 | 30 | -4 | 11 | 16 | 30 | 22 | 19 | 84 | 4.24 | -0.7 | 15 | 10,180 | s. | 46 | sw. | 22 | 0 | 4 | 27 | 9.1 | 24.7 |
| Rochester. | 523 | 97 | 113 | 29.40 | 29.99 | -0.08 | 24.6 | + 0.6 | 47 | 5 | 31 | -3 | 11 | 16 | 31 | 22 | 17 | 75 | 3.04 | -0.1 | 17 | 8,790 | sw. | 48 | w. | 22 | 4 | 8 | 19 | 7.5 | 22.7 |
| Syracuse. | 597 | 97 | 113 | 29.33 | 30.00 | -0.07 | 24.0 | + 1.0 | 49 | 5 | 32 | -3 | 11 | 16 | 32 | 23 | 18 | 78 | 2.45 | + 0.3 | 19 | 10,417 | w. | 50 | w. | 22 | 1 | 11 | 19 | 7.6 | 22.4 |
| Erie. | 714 | 130 | 166 | 29.20 | 29.99 | -0.09 | 26.6 | + 0.1 | 50 | 5 | 34 | 3 | 27 | 20 | 33 | 24 | 20 | 77 | 2.34 | -0.7 | 12 | 10,870 | sw. | 58 | sw. | 23 | 1 | 11 | 19 | 7.9 | 11.3 |
| Cleveland. | 762 | 190 | 201 | 29.17 | 30.02 | -0.07 | 27.3 | + 1.1 | 51 | 5 | 35 | 3 | 15 | 20 | 33 | 25 | 21 | 76 | 2.55 | + 0.1 | 14 | 11,105 | w. | 49 | w. | 22 | 8 | 10 | 13 | 6.6 | 11.6 |
| Sandusky. | 629 | 62 | 103 | 29.31 | 30.02 | -0.07 | 26.2 | -0.1 | 49 | 29 | 34 | 0 | 14 | 19 | 30 | 24 | 20 | 80 | 2.66 | + 0.6 | 10 | 10,509 | w. | 52 | sw. | 22 | 6 | 12 | 12 | 6.3 | 11.8 |
| Toledo. | 628 | 208 | 243 | 29.32 | 30.03 | -0.06 | 25.6 | -0.1 | 49 | 29 | 34 | 2 | 14 | 15 | 31 | 23 | 20 | 80 | 2.64 | + 0.7 | 13 | 11,616 | w. | 56 | sw. | 22 | 8 | 9 | 14 | 5.9 | 7.9 |
| Detroit. | 730 | 218 | 245 | 29.18 | 30.01 | -0.07 | 24.0 | -0.3 | 43 | 4 | 31 | -1 | 14 | 17 | 24 | 21 | 18 | 82 | 2.31 | + 0.3 | 12 | 10,030 | w. | 54 | sw. | 22 | 6 | 9 | 16 | 6.2 | 13.8 |
| Upper Lake Region. | | | | | | | | | | | | | | | | | | | | | | | | | | | 6.3 | | | | |
| Alpena. | 609 | 13 | 92 | 29.26 | 29.98 | -0.08 | 17.2 | -1.5 | 45 | 29 | 25 | -11 | 27 | 10 | 33 | 16 | 13 | 86 | 1.13 | -1.1 | 12 | 9,615 | w. | 43 | e. | 21 | 4 | 13 | 14 | 6.7 | 18.7 |
| Escanaba. | 612 | 54 | 60 | 29.28 | 29.98 | -0.07 | 11.6 | -2.9 | 38 | 28 | 23 | -16 | 23 | 3 | 27 | 10 | 7 | 84 | 0.99 | -0.6 | 9 | 8,588 | dw. | 38 | ne. | 21 | 13 | 9 | 9 | 5.4 | 19.1 |
| Grand Haven. | 632 | 51 | 92 | 29.25 | 30.00 | -0.07 | 23.4 | -1.1 | 42 | 28 | 29 | 11 | 18 | 31 | 22 | 16 | 75 | 1.35 | -1.4 | 15 | 10,792 | w. | 47 | sw. | 21 | 5 | 11 | 19 | 7.3 | 12.2 | |
| Grand Rapids. | 707 | 70 | 87 | 29.20 | 30.01 | -0.05 | 22.8 | -1.0 | 40 | 21 | 23 | -9 | 11 | 16 | 23 | 21 | 17 | 80 | 1.40 | -1.4 | 14 | 5,667 | w. | 27 | w. | 18 | 2 | 15 | 14 | 7.1 | 16.1 |
| Houghton. | 684 | 62 | 99 | 29.21 | 29.97 | -0.08 | 11.6 | -2.9 | 37 | 9 | 19 | -24 | 27 | 4 | 39 | 21 | 17 | 80 | 1.18 | -0.9 | 16 | 8,826 | w. | 46 | w. | 7 | 4 | 7 | 7 | 10.6 | 14.0 |
| Lansing. | 878 | 11 | 62 | 29.02 | 30.00 | -0.06 | 21.0 | -1.0 | 43 | 8 | 29 | -10 | 11 | 13 | 30 | 18 | 16 | 86 | 1.55 | -0.5 | 11 | 5,699 | sw. | 30 | sw. | 21 | 12 | 17 | 7.1 | 13.0 | 3.2 |
| Ludington. | 637 | 60 | 66 | 29.23 | 29.98 | -0.08 | 20.8 | - | 33 | 28 | 27 | -1 | 11 | 15 | 29 | 20 | 17 | 84 | 1.61 | -0.8 | 17 | 9,827 | w. | 40 | sw. | 23 | 3 | 10 | 18 | 7.8 | 19.8 |
| Marquette. | 734 | 77 | 111 | 29.15 | 29.99 | -0.05 | 12.6 | -3.3 | 36 | 29 | 20 | -9 | 14 | 5 | 28 | 11 | 8 | 86 | 1.20 | -0.8 | 13 | 8,482 | w. | 41 | sw. | 16 | 3 | 10 | 15 | 6.6 | 13.1 |
| Port Huron. | 638 | 70 | 120 | 29.27 | 29.99 | -0.07 | 21.0 | -0.8 | 42 | 8 | 28 | -3 | 6 | 12 | 14 | 20 | 17 | 87 | 1.32 | -0.6 | 11 | 9,206 | w. | 46 | w. | 22 | 8 | 9 | 14 | 6.3 | 9.3 |
| Saginaw. | 641 | 48 | 82 | 29.27 | 29.99 | -0.08 | 19.8 | - | 42 | 29 | 28 | -3 | 11 | 12 | 31 | 19 | 17 | 92 | 0.01 | -1.2 | 14 | 9,261 | w. | 36 | sw. | 22 | 6 | 10 | 11 | 5.4 | 9.3 |
| Baile Ste. Marie. | 614 | 11 | 29 | 29.73 | 29.97 | -0.06 | 10.6 | -2.7 | 35 | 29 | 18 | -22 | 2 | 3 | 37 | 9 | 6 | 83 | 1.42 | -0.8 | 18 | 7,548 | e. | 48 | w. | 5 | 4 | 3 | 4 | 16.0 | 14.0 |
| Chicago. | 823 | 140 | 310 | 29.10 | 30.04 | -0.06 | 24.2 | + 0.5 | 47 | 29 | 32 | -4 | 14 | 17 | 27 | 22 | 18 | 75 | 1.55 | -0.4 | 18 | 10,483 | sw. | 56 | sw. | 21 | 18 | 9 | 10 | 8.4 | 9.9 |
| Green Bay. | 617 | 109 | 144 | 29.30 | 30.00 | -0.06 | 11.2 | -3.4 | 41 | 29 | 20 | -17 | 15 | 2 | 30 | 10 | 5 | 77 | 1.96 | + 0.3 | 6 | 9,309 | sw. | 56 | n. | 21 | 12 | 5 | 18 | 6.8 | 20.0 |
| Milwaukee. | 681 | 113 | 133 | 29.24 | 30.01 | -0.07 | 18.7 | -1.1 | 43 | 28 | 27 | -10 | 16 | 20 | 31 | 16 | 14 | 84 | 1.42 | -0.6 | 8 | 9,321 | sw. | 53 | e. | 21 | 15 | 5 | 18 | 5.6 | 15.3 |
| Duluth. | 1,133 | 11 | 47 | 27.95 | 30.05 | -0.06 | 3.1 | -7.3 | 38 | 8 | 13 | -24 | 15 | -7 | 30 | 1 | -1 | 86 | 0.80 | -0.2 | 4 | 9,918 | sw. | | | | | | | | |

TABLE I.—Climatological data for Weather Bureau stations, January, 1917—Continued.

| Districts and stations. | Elevation of instruments. | | Pressure. | | Temperature of the air. | | | | | | | | | | Precipitation. | | Wind. | | | | | | | | | | | | | | | | |
|--------------------------|----------------------------|---------------------------|--------------------------|---------------------------------------|---|------------------------|-----------------------------|------------------------|----------|-------|---------------|-----------------------|-------------------------|--------|------------------------------------|------------------------------|-----------------|-----------------|-----------------------|------------|-------------------|-----------------------------|-----------------|---------------------------------|------|-----|-----|------|------|------|------|-----|-----|
| | Barometer above sea level. | Thermometer above ground. | Anemometer above ground. | Station, reduced to mean of 24 hours. | Sea level, reduced to mean of 24 hours. | Departure from normal. | Mean max., + mean min. + 2. | Departure from normal. | Maximum. | Date. | Mean minimum. | Greatest daily range. | Mean relative humidity. | Total. | Mean temperature of the dew point. | Days with 0.01 inch or more. | Total movement. | Miles per hour. | Prevailing direction. | Direction. | Maximum velocity. | Average cloudiness, tenths. | Total snowfall. | Snow on ground at end of month. | | | | | | | | | |
| | Ft. | Ft. | Ft. | In. | In. | In. | °F. | °F. | °F. | °F. | °F. | °F. | % | in. | in. | Miles. | | | | | 0-10 | In. | In. | | | | | | | | | | |
| <i>Northern Slope.</i> | | | | | | | 20.4 | — | 17.4 | 48 | 11 | 31 | -33 | 31 | 10 | 39 | 0.35 | + 0.3 | 13 | 6,817 | sw. | 40 | w. | 9 | 10 | 15 | 6 | 6.2 | 9.1 | 7.3 | | | |
| Billings..... | 3,140 | 5 | 27.29 | 30.06 | -0.04 | 11.2 | -2.3 | 49 | 9 | 22 | 37 | 31 | 0 | 51 | 10 | 7 | 85 | + 0.3 | 13 | 6,995 | sw. | 46 | n. | 11 | 9 | 20 | 7.5 | 11.1 | 9.0 | 3.4 | | | |
| Hayre..... | 2,505 | 11 | 44 | 25.74 | 30.10 | -0.05 | 19.6 | -0.4 | 49 | 5 | 28 | -25 | 31 | 12 | 42 | 16 | 11 | 89 | + 0.2 | 16 | 3,309 | w. | 27 | sw. | 3 | 10 | 18 | 7.5 | 10.3 | 9.0 | 0.0 | | |
| Helena..... | 4,110 | 26 | 26.92 | 30.11 | -0.01 | 20.1 | + 0.5 | 45 | 5 | 28 | -20 | 31 | 13 | 30 | 18 | 14 | 77 | 1.05 | -0.5 | 16 | 4,955 | se. | 36 | nw. | 11 | 9 | 16 | 5.0 | 7.3 | 9.3 | 0.3 | | |
| Kalispell..... | 2,962 | 11 | 34 | 27.44 | 30.12 | -0.01 | 14.6 | + 0.1 | 48 | 9 | 25 | -35 | 31 | 4 | 36 | 11 | 8 | 78 | + 0.2 | 10 | 6,546 | w. | 46 | sw. | 28 | 13 | 8 | 10 | 4.5 | 7.0 | 1.1 | | |
| Miles City..... | 2,371 | 26 | 48 | 27.44 | 30.12 | -0.00 | 21.2 | -0.3 | 56 | 11 | 33 | -22 | 9 | 43 | 17 | 9 | 68 | + 0.2 | 6 | 16,096 | w. | 78 | w. | 8 | 18 | 6 | 7 | 3.5 | 4.1 | 0.0 | | | |
| Rapid City..... | 3,259 | 50 | 58 | 26.53 | 30.10 | -0.00 | 18.2 | -0.3 | 53 | 9 | 32 | -12 | 22 | 12 | 45 | 17 | 8 | 57 | -0.1 | 6 | 4,430 | rw. | 44 | w. | 9 | 10 | 5 | 16 | 6.5 | 11.7 | 7.3 | | |
| Cheyenne..... | 6,088 | 84 | 101 | 23.86 | 30.04 | -0.01 | 21.8 | -0.3 | 50 | 11 | 28 | -34 | 22 | -1 | 44 | 9 | 1 | 61 | + 0.3 | 3 | 4,337 | w. | 48 | sw. | 28 | 13 | 12 | 6 | 4.7 | 8.0 | 4.6 | | |
| Lander..... | 5,372 | 60 | 68 | 24.55 | 30.16 | -0.00 | 13.5 | -0.9 | 49 | 11 | 28 | -34 | 22 | -1 | 44 | 14 | 10 | 78 | -0.4 | 6 | 7,636 | s. | 42 | sw. | 27 | 7 | 7 | 17 | 6.6 | 7.3 | 2.4 | | |
| Sheridan..... | 3,790 | 10 | 47 | 26.03 | 30.10 | -0.00 | 18.2 | -0.3 | 53 | 9 | 32 | -29 | 31 | 5 | 49 | 14 | 10 | 78 | -0.4 | 6 | 12,744 | s. | 30 | 14 | 10 | 7 | 3.8 | 6.2 | 0.6 | | | | |
| Yellowstone Park..... | 6,200 | 11 | 48 | 23.78 | 30.19 | + 0.05 | 11.4 | -0.6 | 52 | 8 | 28 | -19 | 22 | 16 | 4 | 33 | 10 | 6 | 75 | -0.6 | 1.6 | 12 | 7,636 | w. | 36 | nw. | 30 | 14 | 10 | 7 | 3.8 | 6.2 | 0.6 |
| North Platte..... | 2,821 | 11 | 51 | 27.06 | 30.12 | -0.00 | 22.8 | + 1.4 | 58 | 9 | 36 | -21 | 22 | 9 | 40 | 17 | 13 | 74 | 0.74 | + 0.3 | 5 | 5,022 | w. | 36 | nw. | 30 | 14 | 10 | 7 | 3.8 | 6.2 | 0.6 | |
| <i>Middle Slope.</i> | | | | | | | 31.9 | + 2.8 | | | | | | | | | 65 | 0.34 | -0.4 | | | | | | | | | 4.6 | | | | | |
| Denver..... | 5,292 | 106 | 113 | 24.63 | 30.04 | -0.01 | 28.4 | -0.7 | 58 | 11 | 40 | -10 | 23 | 17 | 44 | 22 | 12 | 55 | 0.20 | -0.2 | 6 | 5,707 | se. | 43 | sw. | 9 | 13 | 13 | 5 | 4.5 | 4.9 | 0.4 | |
| Pueblo..... | 4,685 | 80 | 86 | 25.21 | 30.02 | -0.03 | 30.1 | + 1.0 | 66 | 11 | 45 | -11 | 17 | 15 | 54 | 23 | 11 | 51 | -0.22 | -0.1 | 4 | 6,461 | nw. | 39 | sw. | 9 | 20 | 8 | 3 | 2.6 | 5.0 | 0.6 | |
| Concordia..... | 1,392 | 50 | 58 | 25.56 | 30.09 | -0.05 | 28.8 | + 4.4 | 59 | 29 | 40 | -9 | 31 | 18 | 42 | 25 | 21 | 78 | -0.60 | -0.1 | 4 | 6,096 | nw. | 38 | 12 | 11 | 5 | 4.6 | 5.0 | 0.6 | | | |
| Dodge City..... | 2,500 | 11 | 51 | 27.39 | 30.08 | -0.08 | 31.3 | + 4.0 | 68 | 9 | 44 | 0 | 22 | 18 | 45 | 24 | 19 | 69 | 0.22 | -0.3 | 3 | 7,117 | d. | 40 | n. | 12 | 17 | 6 | 8 | 3.7 | 2.7 | 0.0 | |
| Wichita..... | 1,358 | 139 | 158 | 28.59 | 30.06 | -0.07 | 33.8 | + 4.1 | 68 | 29 | 44 | -1 | 31 | 24 | 52 | 29 | 22 | 68 | 0.41 | -0.4 | 5 | 9,883 | s. | 48 | nw. | 10 | 16 | 11 | 4 | 3.9 | 3.7 | 0.0 | |
| Altus..... | 1,410 | 5 | 5 | 37.8 | 41.6 | -0.00 | 41.6 | -0.1 | 70 | 30 | 56 | 10 | 14 | 28 | 44 | 37 | 22 | 60 | 0.30 | -0.2 | 2 | 5,517 | nw. | 37 | nw. | 9 | 17 | 7 | 7 | 3.9 | 2.3 | 0.0 | |
| McKeece..... | 652 | 4 | 4 | 37.8 | 41.6 | -0.00 | 39.0 | + 4.3 | 74 | 30 | 51 | 10 | 31 | 27 | 51 | 32 | 26 | 67 | 0.37 | -1.0 | 5 | 10,271 | s. | 54 | w. | 21 | 14 | 10 | 7 | 4.5 | 2.0 | 0.0 | |
| <i>Southern Slope.</i> | | | | | | | 43.8 | + 2.3 | | | | | | | | | 58 | 0.42 | -0.3 | | | | | | | | | 4.6 | | | | | |
| Abilene..... | 1,738 | 10 | 52 | 28.25 | 30.09 | 0.00 | 46.0 | + 3.4 | 81 | 30 | 58 | 17 | 15 | 34 | 51 | 37 | 26 | 54 | 0.71 | -0.2 | 4 | 8,500 | sw. | 39 | w. | 28 | 11 | 5 | 15 | 5.8 | 5.8 | 0.0 | |
| Amarillo..... | 3,676 | 10 | 49 | 26.25 | 30.06 | -0.00 | 36.6 | + 2.7 | 72 | 30 | 48 | 5 | 22 | 25 | 39 | 29 | 22 | 65 | 0.69 | + 0.1 | 4 | 8,908 | sw. | 40 | sw. | 21 | 22 | 6 | 3 | 3.8 | 6.8 | 0.0 | |
| Del Rio..... | 944 | 64 | 71 | 29.03 | 30.08 | + 0.02 | 53.6 | + 3.4 | 84 | 31 | 64 | 26 | 15 | 44 | 38 | 31 | 20 | 54 | 0.09 | -0.7 | 3 | 5,856 | e. | 32 | dw. | 4 | 8 | 14 | 9 | 5.6 | 0.0 | 0.0 | |
| Roswell..... | 3,566 | 75 | 85 | 26.38 | 30.07 | + 0.03 | 39.0 | -0.2 | 73 | 30 | 52 | 17 | 14 | 26 | 48 | 31 | 20 | 54 | 0.19 | -0.3 | 3 | 5,517 | nw. | 37 | nw. | 9 | 17 | 7 | 7 | 3.9 | 2.3 | 0.0 | |
| <i>Southern Plateau.</i> | | | | | | | 37.9 | + 2.8 | | | | | | | | | 69 | 0.84 | + 0.1 | | | | | | | | | 4.1 | | | | | |
| El Paso..... | 3,762 | 110 | 133 | 26.22 | 30.04 | + 0.03 | 44.8 | + 0.7 | 68 | 30 | 55 | 25 | 25 | 34 | 35 | 37 | 27 | 54 | 0.32 | -0.2 | 4 | 7,783 | w. | 40 | w. | 20 | 14 | 7 | 10 | 4.7 | 0.5 | 0.0 | |
| Santa Fe..... | 7,013 | 57 | 66 | 23.17 | 30.06 | + 0.02 | 28.0 | -0.5 | 48 | 30 | 38 | 6 | 23 | 18 | 29 | 23 | 17 | 65 | 0.55 | 0.0 | 6 | 7,041 | n. | 38 | sw. | 20 | 13 | 11 | 7 | 4.6 | 3.4 | 0.0 | |
| Flagstaff..... | 6,908 | 8 | 57 | 23.30 | 30.08 | + 0.03 | 21.5 | -5.2 | 53 | 11 | 35 | -15 | 22 | 8 | 53 | 19 | 17 | 65 | 0.55 | 0.0 | 10 | 2.97 | w. | 36 | se. | 24 | 14 | 7 | 10 | 4.6 | 3.4 | 0.0 | |
| Phoenix..... | 1,108 | 76 | 81 | 28.89 | 30.08 | + 0.05 | 49.0 | -1.0 | 70 | 8 | 60 | 30 | 23 | 38 | 34 | 43 | 37 | 72 | 2.20 | + 1.0 | 9 | 3,145 | w. | 24 | w. | 20 | 18 | 2 | 11 | 4.2 | 0.0 | 0.0 | |
| Yuma..... | 141 | 9 | 54 | 29.94 | 30.09 | + 0.04 | 51.0 | -3.7 | 71 | 27 | 61 | 35 | 25 | 41 | 31 | 43 | 34 | 58 | 1.02 | + 0.6 | 4 | 4,318 | n. | 21 | n. | 10 | 16 | 8 | 7 | 3.5 | 0.0 | 0.0 | |
| Independence..... | 3,910 | 11 | 42 | 26.04 | 30.16 | + 0.09 | 33.1 | -7.4 | 72 | 30 | 54 | -1 | 23 | 12 | 57 | 25 | 24 | 94 | 0.11 | -0.8 | 2 | | w. | | | 17 | 9 | 5 | 3.5 | 6.0 | 0.0 | 0.0 | |
| <i>Middle Plateau.</i> | | | | | | | 16.7 | -11.7 | | | | | | | | | 78 | 0.69 | -0.4 | | | | | | | | | 4.4 | | | | | |
| Peno..... | 4,532 | 74 | 81 | 25.57 | 30.30 | + 0.17 | 22.8 | -9.7 | 51 | 27 | 34 | -5 | 17 | 12 | 35 | 20 | 15 | 74 | 0.05 | -1.9 | 3 | 3,591 | se. | 43 | w. | 29 | 14 | 11 | 6 | 4.1 | 0.3 | T. | |
| Tonopah..... | 6,090 | 12 | 20 | 24.09 | 30.28 | -0.21 | 20.6 | -6.1 | 43 | 29 | 28 | -7 | 16 | 14 | 25 | 18 | 15 | 78 | 0.50 | -0.2 | 4 | 5,831 | w. | 38 | nw. | 20 | 18 | 8 | 5 | 3.3 | 6.3 | T. | |
| Winnebucca..... | 4,344 | 18 | 56 | 25.74 | 30.37 | + 0.21 | 11.8 | -17.0 | 43 | 29 | 27 | -22 | 17 | -3 | 44 | 10 | 5 | 75 | 0.90 | -0.1 | 7 | 4,854 | se. | 35 | sw. | 28 | 16 | 7 | 8 | 4.3 | 10.8 | 3.4 | |
| Modena..... | 5,479 | 10 | 43 | 24.64 | 30.24 | + 0.14 | 13.6 | -13.9 | 43 | 11 | 28 | -18 | 17 | -1 | 44 | 12 | 9 | 82 | 1.06 | + 0.3 | 8 | 5,816 | w. | 49 | nw. | 20 | 17 | 10 | 4 | 3.2 | 10.6 | 3.4 | |
| Salt Lake City..... | 4,360 | 147 | 189 | 25.69 | 30.22 | + 0.07 | 21.2 | -7.6 | 45 | 29 | 29 | 2 | 18 | 14 | 30 | 19 | 14 | 73 | 0.91 | -0.4 | 8 | 4,892 | se. | 42 | nw. | 30 | 6 | 14 | 11 | 6.1 | 15.8 | 7.3 | |
| Grand Junction..... | 4,602 | 82 | 96 | 25.46 | 30.21 | + 0.15 | 14.2 | -10.5 | 37 | 10 | 26 | -14 | 27 | 3 | 35 | 12 | 10 | 86 | 0.73 | + 0.2 | 13 | 3,065 | nw. | 24 | nw. | 30 | 12 | 11 | 8 | 5.1 | 14.0 | 4.8 | |
| <i>Northern Plateau.</i> | | | | | | | 25.0 | -3.8 | | | | | | | | | 78 | 1.06 | -0.6 | | | | | | | | | 6.8 | | | | | |
| Baker..... | 3,471 | 48 | 53 | 26.54 | 30.27 | + 0.11 | 18.2 | -5.7 | 43 | 27 | 34 | -13 | 16 | 10 | 31 | 18 | 13 | 80 | 1.35 | 0.0 | 13 | 4,609 | se. | 29 | sw. | 27 | 12 | 5 | 14 | 5.3 | 13.5 | 7.3 | |
| Poise..... | 2,739 | 78 | 88 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

TABLE II.—Accumulated amounts of precipitation for each 5 minutes, for the principal storms in which the rate of fall equaled or exceeded 0.25 inch in any 5 minutes, or 0.80 in 1 hour, during January, 1917, at all stations furnished with self-registering gages.

* Self-register not in use.

TABLE II.—Accumulated amounts of precipitation for each 5 minutes, for the principal storms in which the rate of fall equaled or exceeded 0.25 inch in any 5 minutes, or 0.80 in 1 hour, during January, 1917, at all stations furnished with self-registering gages—Continued.

| Stations. | Date. | Total duration. | | Total amount of precipitation. | Excessive rate. | | Amount before excessive rate began. | Depths of precipitation (in inches) during periods of time indicated. | | | | | | | | | | | | |
|-------------------------|-------|-----------------|-----------|--------------------------------|-----------------|------------|-------------------------------------|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|
| | | From— | To— | | Began— | Ended— | | 5 min. | 10 min. | 15 min. | 20 min. | 25 min. | 30 min. | 35 min. | 40 min. | 45 min. | 50 min. | 60 min. | 80 min. | 100 min. |
| Miami, Fla. | 14 | | | 0.04 | | | | | | | | | | | | | | | 0.04 | |
| Milwaukee, Wis. | 21 | | | 0.67 | | | | | | | | | | | | | | * | | |
| Minneapolis, Minn. | 21 | | | 0.81 | | | | | | | | | | | | | | * | | |
| Mobile, Ala. | 22 | | | 1.40 | | | | | | | | | | | | | | 0.52 | | * |
| Modena, Utah | 19-20 | | | 0.72 | | | | | | | | | | | | | | * | | |
| Montgomery, Ala. | 24 | | | 1.37 | | | | | | | | | | | | | | 0.49 | | |
| Moorhead, Minn. | 11-12 | | | 0.22 | | | | | | | | | | | | | | * | | |
| Mount Tamalpais, Cal. | 5 | | | 0.53 | | | | | | | | | | | | | | 0.16 | | |
| Nantucket, Mass. | 14 | | | 0.24 | | | | | | | | | | | | | | 0.19 | | |
| Nashville, Tenn. | 4-5 | 8:55 p.m. | 6:25 a.m. | 1.61 | 1:09 a.m. | 1:58 a.m. | 0.29 | 0.13 | 0.26 | 0.37 | 0.48 | 0.59 | 0.70 | 0.77 | 0.85 | 0.93 | 0.97 | | | |
| New Haven, Conn. | 21 | 1:25 p.m. | 8:00 p.m. | 1.57 | 5:01 p.m. | 5:45 p.m. | 0.29 | 0.13 | 0.62 | 0.88 | 0.70 | 0.76 | 0.84 | 0.89 | 0.95 | 1.00 | | * | | |
| New Orleans, La. | 28 | 3:20 p.m. | 5:15 p.m. | 1.00 | 3:25 p.m. | 4:10 p.m. | 0.01 | 0.21 | 0.35 | 0.41 | 0.46 | 0.50 | 0.59 | 0.67 | 0.81 | 0.90 | | 0.16 | | |
| New York, N. Y. | 21-22 | | | 0.94 | | | | | | | | | | | | | | 0.30 | | |
| Norfolk, Va. | 14 | | | 0.37 | | | | | | | | | | | | | | * | | |
| Northfield, Vt. | 13-14 | | | 1.19 | | | | | | | | | | | | | | 0.21 | | |
| North Head, Wash. | 5 | | | 0.28 | | | | | | | | | | | | | | * | | |
| North Platte, Nebr. | 20-21 | | | 0.56 | | | | | | | | | | | | | | * | | |
| Oklahoma, Okla. | 16-17 | | | 0.18 | | | | | | | | | | | | | | * | | |
| Omaha, Nebr. | 20-21 | | | 0.46 | | | | | | | | | | | | | | * | | |
| Oswego, N. Y. | 13-14 | | | 0.79 | | | | | | | | | | | | | | * | | |
| Palestine, Tex. | 21 | 1:20 a.m. | 2:40 p.m. | 0.68 | 12:18 p.m. | 12:37 p.m. | 0.13 | 0.24 | 0.39 | 0.46 | 0.51 | | | | | | | 0.46 | | |
| Parkersburg, W. Va. | 21 | | | 1.80 | | | | | | | | | | | | | | * | | |
| Pensacola, Fla. | 23-24 | 6:25 p.m. | 9:40 a.m. | 2.74 | 6:21 a.m. | 7:24 a.m. | 1.27 | 0.22 | 0.32 | 0.45 | 0.60 | 0.70 | 0.81 | 0.88 | 0.94 | 0.96 | 0.98 | 1.15 | 1.22 | |
| Peoria, Ill. | 4-5 | | | 0.78 | | | | | | | | | | | | | | * | | |
| Philadelphia, Pa. | 21 | | | 0.63 | | | | | | | | | | | | | | * | | |
| Phoenix, Ariz. | 19 | | | 0.83 | | | | | | | | | | | | | | 0.25 | | |
| Pierre, S. Dak. | 30-31 | | | 0.36 | | | | | | | | | | | | | | * | | |
| Pittsburgh, Pa. | 21 | | | 1.64 | | | | | | | | | | | | | | 0.29 | | |
| Pocatello, Idaho | 28 | | | 0.20 | | | | | | | | | | | | | | * | | |
| Point Reyes Light, Cal. | 5 | | | 0.39 | | | | | | | | | | | | | | 0.15 | | |
| Port Huron, Mich. | 5 | | | 0.48 | | | | | | | | | | | | | | * | | |
| Portland, Me. | 5 | | | 1.15 | | | | | | | | | | | | | | 0.23 | | |
| Portland, Oreg. | 27 | | | 0.67 | | | | | | | | | | | | | | 0.12 | | |
| Providence, R. I. | 5-6 | | | 0.92 | | | | | | | | | | | | | | * | | |
| Pueblo, Colo. | 15 | | | 0.12 | | | | | | | | | | | | | | * | | |
| Raleigh, N. C. | 29 | | | 1.30 | | | | | | | | | | | | | | 0.32 | | |
| Rapid City, S. Dak. | 20-21 | | | 0.53 | | | | | | | | | | | | | | * | | |
| Reading, Pa. | 21-22 | | | 1.83 | | | | | | | | | | | | | | 0.30 | | |
| Red Bluff, Cal. | 5 | | | 1.31 | | | | | | | | | | | | | | 0.21 | | |
| Reno, Nev. | 30 | | | 0.03 | | | | | | | | | | | | | | * | | |
| Richmond, Va. | 13-14 | | | 0.62 | | | | | | | | | | | | | | * | | |
| Rochester, N. Y. | 21-22 | | | 0.61 | | | | | | | | | | | | | | * | | |
| Roseburg, Oreg. | 27 | | | 0.53 | | | | | | | | | | | | | | 0.16 | | |
| Roswell, N. Mex. | 14 | | | 0.15 | | | | | | | | | | | | | | * | | |
| Sacramento, Cal. | 2 | | | 1.13 | | | | | | | | | | | | | | 0.12 | | |
| Saginaw, Mich. | 21-22 | | | 0.38 | | | | | | | | | | | | | | * | | |
| St. Joseph, Mo. | 20 | | | 0.19 | | | | | | | | | | | | | | 0.11 | | |
| St. Louis, Mo. | 4-5 | | | 0.93 | | | | | | | | | | | | | | * | | |
| St. Paul, Minn. | 21 | | | 1.05 | | | | | | | | | | | | | | * | | |
| Salt Lake City, Utah | 19-20 | | | 0.38 | | | | | | | | | | | | | | * | | |
| San Antonio, Tex. | 21-22 | | | 0.53 | | | | | | | | | | | | | | * | | |
| San Diego, Cal. | 13 | | | 0.62 | | | | | | | | | | | | | | 0.26 | | |
| Sand Key, Fla. | 26 | | | 0.02 | | | | | | | | | | | | | | 0.02 | | |
| Sandusky, Ohio | 5 | | | 1.31 | | | | | | | | | | | | | | * | | |
| Sandy Hook, N. J. | 23 | | | 0.40 | | | | | | | | | | | | | | 0.26 | | |
| San Francisco, Cal. | 5 | | | 0.32 | | | | | | | | | | | | | | 0.19 | | |
| San Jose, Cal. | 2 | | | 0.68 | | | | | | | | | | | | | | 0.10 | | |
| San Luis Obispo, Cal. | 3 | | | 0.48 | | | | | | | | | | | | | | 0.09 | | |
| Santa Fe, N. Mex. | 20 | | | 0.39 | | | | | | | | | | | | | | * | | |
| Sault Ste. Marie, Mich. | 21-22 | | | 0.32 | | | | | | | | | | | | | | * | | |
| Savannah, Ga. | 14 | | | 1.08 | | | | | | | | | | | | | | 0.45 | | |
| Scranton, Pa. | 21-22 | | | 0.60 | | | | | | | | | | | | | | * | | |
| Seattle, Wash. | 5 | | | 0.18 | | | | | | | | | | | | | | 0.08 | | |
| Sheridan, Wyo. | 28-29 | | | 0.58 | | | | | | | | | | | | | | * | | |
| Shreveport, La. | 4 | 6:40 p.m. | 9:50 p.m. | 0.87 | 7:33 p.m. | 7:55 p.m. | 0.04 | 0.14 | 0.35 | 0.43 | 0.54 | 0.61 | | | | | | * | | |
| Sioux City, Iowa | 20-21 | | | 0.76 | | | | | | | | | | | | | | * | | |
| Spokane, Wash. | 1-2 | | | 0.45 | | | | | | | | | | | | | | * | | |
| Springfield, Ill. | 4-5 | | | 1.12 | | | | | | | | | | | | | | * | | |
| Springfield, Mo. | 4 | | | 0.76 | | | | | | | | | | | | | | 0.33 | | |
| Syracuse, N. Y. | 18-19 | | | 0.61 | | | | | | | | | | | | | | * | | |
| Tacoma, Wash. | 2 | | | 0.34 | | | | | | | | | | | | | | 0.11 | | |
| Tampa, Fla. | 5 | | | 0.34 | | | | | | | | | | | | | | 0.34 | | |
| Tatoosh Island, Wash. | 8 | | | 0.91 | | | | | | | | | | | | | | 0.25 | | |
| Taylor, Tex. | 16-17 | | | 0.15 | | | | | | | | | | | | | | * | | |
| Terre Haute, Ind. | 4 | | | 1.01 | | | | | | | | | | | | | | 0.30 | | |
| Thomasville, Ga. | 24-25 | 7:56 p.m. | 8:33 a.m. | 2.81 | 8:27 p.m. | 9:03 p.m. | 0.05 | 0.08 | 0.14 | 0.24 | 0.43 | 0.61 | 0.71 | 0.76 | 0.80 | | | * | | |
| Toledo, Ohio | 5 | | | 1.50 | | | | | | | | | | | | | | * | | |
| Tonopah, Nev. | 21 | | | 0.29 | | | | | | | | | | | | | | * | | |
| Topeka, Kans. | 20 | | | 0.18 | | | | | | | | | | | | | | 0.08 | | |
| Trenton, N. J. | 21-22 | | | 1.50 | | | | | | | | | | | | | | * | | |
| Valentine, Nebr. | 20-21 | | | 0.27 | | | | | | | | | | | | | | * | | |
| Vicksburg, Miss. | 21 | | | 1.05 | | | | | | | | | | | | | | 0.65 | | |
| Walla Walla, Wash. | 1-2 | | | 0.31 | | | | | | | | | | | | | | * | | |
| Washington, D. C. | 13-14 | | | 0.79 | | | | | | | | | | | | | | * | | |
| Wichita, Kans. | 16-17 | | | 0.17 | | | | | | | | | | | | | | * | | |
| Williston, N. Dak. | 20-21 | | | 0.15 | | | | | | | | | | | | | | * | | |
| Wilmington, N. C. | 24 | | | 1.10 | | | | | | | | | | | | | | 0.41 | | |
| Winnemucca, Nev. | 2-3 | | | 0.46 | | | | | | | | | | | | | | * | | |
| Wytheville, Va. | 4 | | | 1.08 | | | | | | | | | | | | | | 0.30 | | |
| Yankton, S. Dak. | 20-21 | | | 1.17 | | | | | | | | | | | | | | * | | |
| Yellowstone Park, Wyo. | 27-28 | | | 0.25 | | | | | | | | | | | | | | * | | |

* Self-register not in use.

† Record partly estimated.

‡ No precipitation occurred during month.

TABLE III.—Data furnished by the Canadian Meteorological Service, January, 1917.

| Stations. | Barome- ter above M.S.L. Jan. 1916. | Pressure. | | | | Temperature. | | | | | | Precipitation. | | |
|-------------------------|--|--|--|------------------------------------|----------------------------------|------------------------------------|-----------------------|-----------------------|----------|---------|--------|------------------------------------|--------------------|--|
| | | Station reduced to mean of 24 hours. | Sealevel, reduced to mean of 24 hours. | Depart- ture from normal. | Mean max.+ mean min.+2. | Depart- ture from normal. | Mean maxi- mum. | Mean mini- mum. | Highest. | Lowest. | Total. | Depart- ture from normal. | Total snowfall. | |
| St. Johns, N. F. | 125 | 29.51 | 29.65 | -0.21 | 21.3 | -2.5 | 26.8 | 15.9 | 50 | -3 | 2.22 | -3.69 | 11.0 | |
| Sydney, C. B. I. | 48 | 29.85 | 29.89 | -0.04 | 19.9 | -0.6 | 29.2 | 10.6 | 53 | -14 | 4.43 | -0.67 | 22.5 | |
| Halifax, N. S. | 88 | 29.81 | 29.92 | -0.05 | 22.4 | +0.6 | 32.4 | 12.4 | 51 | 9 | 5.87 | +0.10 | 12.8 | |
| Yarmouth, N. S. | 65 | 29.84 | 29.91 | -0.09 | 20.5 | +0.2 | 33.3 | 19.6 | 47 | 6 | 4.88 | -0.68 | 17.5 | |
| Charlottetown, P. E. I. | 38 | 29.84 | 29.88 | -0.08 | 15.6 | -1.4 | 23.5 | 7.7 | 48 | -19 | 3.67 | -0.29 | 15.1 | |
| Chatham, N. B. | 28 | 29.88 | 29.91 | -0.06 | 9.8 | 0.0 | 20.3 | -0.6 | 45 | -22 | 2.62 | -0.67 | 21.3 | |
| Father Point, Que. | 20 | 29.89 | 29.92 | -0.06 | 5.6 | -2.4 | 23.9 | -2.8 | 36 | -23 | 1.20 | -1.65 | 10.5 | |
| Quebec, Que. | 296 | 29.60 | 29.94 | -0.08 | 7.8 | -1.3 | 15.9 | -0.4 | 37 | -21 | 4.88 | +0.87 | 47.0 | |
| Montreal, Que. | 187 | 29.73 | 29.96 | -0.08 | 11.7 | 0.0 | 19.3 | 4.1 | 38 | -16 | 5.14 | +1.41 | 40.2 | |
| Stonecliffe, Ont. | 489 | 29.31 | 29.95 | -0.07 | 9.3 | +2.9 | 22.1 | -3.4 | 36 | -32 | 2.10 | -0.22 | 20.9 | |
| Ottawa, Ont. | 236 | 29.69 | 29.97 | -0.06 | 9.9 | +0.3 | 18.7 | 1.1 | 34 | -20 | 3.88 | +0.89 | 38.8 | |
| Kingston, Ont. | 285 | 29.66 | 30.00 | -0.05 | 17.4 | +0.3 | 25.5 | 9.4 | 40 | -14 | 2.93 | -0.52 | 13.9 | |
| Toronto, Ont. | 379 | 29.55 | 29.98 | -0.07 | 22.6 | +1.2 | 30.0 | 15.2 | 40 | -9 | 2.97 | +0.05 | 17.9 | |
| White River, Ont. | 1,244 | 28.51 | 29.91 | -0.10 | -4.8 | -4.4 | 10.2 | -19.8 | 33 | -48 | 0.97 | -0.72 | 9.7 | |
| Port Stanley, Ont. | 592 | 29.34 | 30.01 | -0.06 | 21.0 | -1.2 | 28.5 | 13.5 | 38 | -18 | 3.17 | +0.18 | 16.8 | |
| Southampton, Ont. | 656 | 29.22 | 29.96 | -0.05 | 20.9 | +0.5 | 27.1 | 14.7 | 40 | -4 | 2.89 | -1.16 | 28.9 | |
| Parry Sound, Ont. | 688 | 29.22 | 29.96 | -0.05 | 14.3 | +0.5 | 22.9 | 5.8 | 37 | -23 | 4.50 | +0.52 | 46.0 | |
| Port Arthur, Ont. | 644 | 29.24 | 30.00 | -0.07 | 2.0 | -1.1 | 12.6 | -8.5 | 32 | -27 | 0.33 | -0.49 | 3.3 | |
| Winnipeg, Man. | 760 | 29.17 | 30.08 | -0.03 | -7.9 | -1.1 | 0.3 | -16.1 | 29 | -38 | 1.10 | +0.22 | 11.0 | |
| Minnedosa, Man. | 1,690 | 28.08 | 30.08 | -0.07 | -8.1 | -0.9 | 1.9 | -18.2 | 37 | -38 | 2.22 | +1.42 | 22.2 | |
| Qu'Appelle, Sask. | 2,115 | 27.58 | 29.98 | -0.10 | -4.1 | -0.3 | 6.7 | -14.9 | 39 | -42 | 2.15 | +1.65 | 21.5 | |
| Medicine Hat, Alberta. | 2,144 | 27.61 | 30.00 | -0.07 | 11.0 | +5.5 | 21.8 | 0.2 | 48 | -46 | 0.72 | +0.15 | 5.2 | |
| Swift Current, Sask. | 2,392 | 27.28 | 30.01 | -0.08 | 4.7 | +1.6 | 16.3 | -6.9 | 39 | -40 | 1.13 | +0.49 | 11.3 | |
| Calgary, Alberta. | 3,423 | 26.30 | 30.01 | -0.02 | 13.3 | +4.9 | 24.6 | 2.1 | 48 | -36 | 0.34 | -0.19 | 3.4 | |
| Banff, Alberta. | 4,521 | 29.39 | 30.15 | +0.18 | 37.8 | -0.7 | 41.0 | 34.6 | 49 | 13 | 4.41 | -0.98 | 18.6 | |
| Edmonton, Alberta. | 2,150 | 27.59 | 30.01 | -0.02 | 3.8 | +2.0 | 14.1 | -6.5 | 47 | -44 | 1.89 | +1.21 | 18.7 | |
| Prince Albert, Sask. | 1,450 | 28.28 | 30.06 | -0.08 | -9.4 | -1.0 | -0.6 | -18.3 | 42 | -43 | 1.16 | +0.19 | 11.6 | |
| Battleford, Sask. | 1,592 | 28.19 | 30.05 | -0.08 | -4.0 | +1.9 | 4.9 | -13.0 | 47 | -36 | 1.08 | +0.68 | 10.8 | |
| Kamloops, B. C. | 1,262 | 28.83 | 30.19 | +0.28 | 17.3 | -5.7 | 22.6 | 12.0 | 44 | -26 | 0.84 | +0.02 | 8.0 | |
| Victoria, B. C. | 230 | 29.39 | 30.15 | +0.18 | 37.8 | -0.7 | 41.0 | 34.6 | 49 | 13 | 4.41 | -0.98 | 18.6 | |
| Barkerville, B. C. | 4,180 | 29.99 | 30.16 | +0.08 | 62.7 | +0.7 | 67.9 | 57.6 | 72 | 49 | 3.32 | -1.62 | 0.0 | |
| Hamilton, Bermuda. | 151 | | | | | | | | | | | | | |

* See description of Table III, given on p. 40, c. A., Jr.